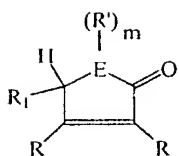


# **INHIBITING POLYMER OXIDATION USING NON- PHENOLIC ANTIOXIDANTS**

Abstract of Disclosure

The oxidation of a polymer is inhibited by adding to the polymer about 0.005 to about 10 phr of an antioxidant having (in non-polymeric form) the general formula



The polymer can be poly(vinylchloride), a polycarbonate, a polyether, polyethylene, polypropylene, or a mixture thereof when the antioxidant is not phthalide and can be poly(vinylchloride), a polycarbonate, a polyether, or a mixture thereof when the antioxidant is

phthalide. In the formula, E is O, S, or N,  $R_1$  is H,  $R'$ ,  $OR'$ ,  $SR'$ ,  $OP(R')_2$ , or  $COR'$ , each R is independently selected from  $R_1$ , alkylene from  $C_1$  to  $C_{12}$ , aminoalkyl from  $C_1$  to  $C_{12}$ , and hydroxyalkyl from  $C_1$  to  $C_{12}$ ,  $R'$  is alkyl from  $C_1$  to  $C_{12}$  or aryl, alkylaryl, or aralkyl from  $C_6$  to  $C_{12}$ ,  $R''$  is G, GO, GS, GNH, NHG, NHGO, NHGNH, NHGS, OG, OGO, OGNH, OGS, SGO, SGNH, or SGS, G is alkylene from  $C_1$  to  $C_{12}$ , arylene from  $C_6$  to  $C_{12}$ , alkylarylene from  $C_7$  to  $C_{12}$ , or arylalkylene from  $C_7$  to  $C_{12}$ , m is 0 if E is O or S and is 1 if E is N, and two R groups can join to form an alicyclic ring or an aromatic ring or an R group and an  $R_1$  group can join to form an alicyclic ring.

